

USSR

UDC: 681.327.66:621.317.757

OFENGENDEN, R. G., RATMANSKIY, R. Yu., ANDREYEV, O. M., BEREZIN, F. N., DYSENKO, B. N., MATSKEVICH, G. G., ODINETS, G. S., SHALEYKO, M. A.

"A Pulse Analyzer"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 11, 1970, Author's Certificate No 265951, filed 25 Jan 68, p 41

Abstract: This author's certificate introduces: 1. A pulse analyzer with memory device of the periodic type, based for instance on a magnetic drum. The analyzer contains an analog-to-code converter, memory unit record and playback amplifiers, a data output module, and a control unit. As a distinguishing feature of the patent, the analyzer is simplified by incorporation of a device which records tags for the beginning and end of isolated segments on an auxiliary field of the periodic memory, a unit which codes these tags with its output connected to the recording amplifier, a tag playback amplifier, a device for decoding the reproduced tags, and a unit which passes pulses located in the isolated segments and which is controlled by the decoding device. 2. A modification of this pulse analyzer which has the distinguishing feature of automatic generation of control signals when predetermined number values are accumulated in selected channels. The analyzer contains a device for recording the indicated numbers on an auxiliary field of the periodic memory in phase with the arrangement of the data

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OFENGENDEN, R. G., et al, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 11, 1970

accumulated in the corresponding channels. Also incorporated in this pulse analyzer is a comparison unit with its inputs connected to the circuit for playback of signals recorded on this field and to the playback amplifier for the information field, while its output is connected to the circuit which shapes the control signals when the accumulated information is equal to or greater than the predetermined numbers. 3. A modification of this analyzer which has the distinguishing feature of numerical integration of the data accumulated in the isolated segments of the band being measured. The output of the pulse pass unit is connected to the input of the comparison unit. 4. A modification of this analyzer which is distinguished by its ability to record additional information in the memory device during data accumulation. The unit contains a commutator whose control input is connected to the track of a synchropulse field on which a signal is recorded which divides the zones where the measured and auxiliary information are recorded on the memory unit of the analyzer.

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1/2 022 UNCLASSIFIED PROCESSING DATE--09OCT70
TITLE--HYDROGEN BONDS AND INFRARED SPECTRA OF H COMPLEXES -U-
AUTHOR--(03)-ODINOKOV, S.E., DZIZENKO, A.K., MASHKOVSKIY, A.A.
COUNTRY OF INFO--USSR
SOURCE--SPECTROSC. LETT. 1970, 3(1), 1-6
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--HYDROGEN BONDING, COMPLEX COMPOUND, BENZENE DERIVATIVE,
HYDROXYL RADICAL, PYRIDINE COMPLEX, DIMERIZATION, IR SPECTRUM
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1992/1989 STEP NO--US/0000/70/003/001/0001/0006
CIRC ACCESSION NO--AP0112953
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--09OCT70

2/2 022

CIRC ACCESSION NO--AP0112953

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE H BOND ENERGY OF A SPECIES CONSISTING OF BZOH H BONDED WITH PYRIDINE, WHICH WAS FORMED BY REACTING DIMERIC BZOH WITH PYRIDINE IN CCl SUB4, WAS ESTD. BY USING THE REACTION EQUIL. CONST. THE EQUIL. CONST. WAS DETD. BY IR SPECTROSCOPY, BY USING THE BANDS AT 1900 AND 1420 CM PRIME NEGATIVE TO DET. THE CONCNS. OF DIMERIC BZOH AND OF THE BZOH PYRIDINE COMPLEX, RESP. THE ENERGY OF THE H BOND BETWEEN BZOH AND PYRIDINE WAS DETD. AS 12.55 KCAL PER MOLE, AS COMPARED WITH A VALUE OF 12.77 KCAL-MOLE CALCD. IN ACCORDANCE WITH THE INTENSITY RULE OF A. B. JOHANSEN (1965). FACILITY: INST. BIOL. ACTIVE SUBST., VLADIVOSTOK, USSR.

UNCLASSIFIED

USSR

UDC 621.376.54

ODINOKOV, V. F., ROTSHTEYN, L. I.

"Pulse Duration Modulated Signal Demodulator"

Moscow, Izmeritel'naya Tekhnika, No 10, 1971, p 66

Abstract: A study was made of a scheme for a converter of pulse duration modulated signals to an analog signal which insures high linearity of the conversion characteristic. In addition, in contrast to the known converters, it has appreciably less phase delay (one interpolation interval instead of 5). The demodulator was used in a low-series device as a component of the data transmission line. Under field conditions, the conversion nonlinearity did not exceed 0.1% in the temperature range from -40 to $+50^{\circ}\text{C}$, the steepness of the modulation characteristic did not change by more than 0.5% for $\tau \geq 10$ microseconds and an interpolation interval of $< 3 \cdot 10^{-3}$ seconds. In the device, the primary conversion of the time interval τ into the voltage amplitude U is carried out by the principle of linear charge of the capacitance by a direct current from a triode generator. The computation processes of the switching triodes were insured for $\tau_{p1} = \tau_{p2} = \tau_{p3} = 10$ microseconds, $U_{\text{max}} = 7$ volts.

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UDC 621.3.049:75
SOLIN, Yu. V., ODINOKOV, V. G., ROZHKOV, B. G., TSVELEV, E. A., MOROZOV, K. K.

"A Method of Applying the Drawing of a Printed Circuit"

Moscow, Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, 1970, No 25, Soviet Patent No 277897, class 21, filed 19 Nov 68, published 5 Aug 70, p 54

Translation: This Author's Certificate introduces a method of applying the drawing of a printed circuit to a light-sensitive layer. The method is implemented by a device which utilizes a light pipe for image transmission. As a distinguishing feature of the patent, manufacturing is simplified, image quality is improved and provision is made for making images of any configuration. Light flux acts on the various input ends of the light pipe in accordance with a predetermined program, resulting in formation of the necessary elements of the printed-circuit module on the outlet end of the light pipe which has a special configuration.

1/2 013 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--DEFORMATION IN THE ROLLING OF SLABS IN VERTICAL ROLLS -U-
AUTHOR--(03)-ODINOKOV, YU.I., SHKLOVSKY, V.YA., POTAPKIN, V.F.
COUNTRY OF INFO--USSR
SOURCE--IZVEST. V.U.Z., CHERNAYA MET., 1970, (2), 87-90
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS, MECH., IND., CIVIL AND MARINE ENGR
TOPIC TAGS--METAL ROLLING, METAL DEFORMATION, LEAD
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/0539 STEP NO--UR/0148/70/000/002/0087/0090
CIRC ACCESSION NO--AP0124234
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0124234

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE THREE DIMENSIONAL DEFORMATION OF SLABS ROLLED IN VERTICAL ROLLS WAS STUDIED AS A FUNCTION OF THE FUNDAMENTAL ROLLING PARAMETERS USING PB MODELS; WITH SPECIAL REF. TO THE QUESTION OF THE DEGREE OF SPREAD RESULTING FROM DIFFERENT ROLLING VELOCITIES. THE RESULTS ARE CONDENSED INTO THE FORM OF GENERALIZED RELATIONSHIPS ENABLING THE DEGREE OF DEFORMATION TO BE DETERMINED AT ANY SPECIFIED LAYER; IN PARTICULAR, THESE RELATIONSHIPS SHOW THE LEVEL AT WHICH SUBSTANTIAL DEFORMATION OF THE METAL CEASES.

UNCLASSIFIED

UDC 669.1:669.295:539.374

USSR

ODINOKOVA, L. P., Kramatorsk Industrial Institute

"Effect of Iron on the Phase Composition and Mechanism of Plastic Deformation of Titanium"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 35, No 5, 1973, pp 1022-1026

Abstract: Annealed Ti-Fe alloys containing from 0.1 to 9.0% Fe had identical phase composition. All of them contained α and β solid solutions and TiFe compound. The quantity of the strengthening TiFe and metastable β phases increased proportionally to increasing concentration of iron. In alloys containing 0.1 and 0.5% Fe, the grains of the α solid solution were of an elongated shape and precipitations of the second phase were visible along the grain boundaries. Alloys with 0.5, 1.25, 6.0, and 9.0% Fe contained all three phases: α , β , and TiFe. Metastable Ti-Fe alloys with 6.0 and 9.0% Fe contained only β and ω phases in the first case, and β in the second case. Mechanical properties of Ti-Fe alloys depended on the phase composition, ratios between individual structural and phase components, and on properties of individual phases. In the presence of small amounts of Fe (0.1 and 0.5%), plasticity, reduction, and impact toughness decreased, but the ultimate strength increased by a rate of 0.7 kg/mm^2 for every 0.1% of Fe. A decrease in plasticity, $1/2$

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ODINOKOVA, L. P., Fizika Metallov i Metallovedeniye, Vol 35, No 5, 1973,
pp 1022-1026

reduction, and impact toughness is attributed to precipitation of the second phase along the grain boundaries. A further increase in the concentration of iron to 1.25% improved the strength of alloy by 5%, while plasticity, reduction, and impact toughness remained at a high level (25, 53, and 14.6, respectively). Alloys containing high concentration of β phase were characterized by a high resistance to plastic deformation along the grain boundaries and within the grain bodies. Alloys with 6 and 9% Fe consisted of more than 5% eutectoid structure and their plastic properties were low.

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UDC 669.295.5

USSR

ODINOKOVA, L. P., Kramatorsk Industrial Institute, Chair of the Science of Metals and Thermal Treatment of Metals

"The Effect of Alpha and Beta Stabilizers on the Mechanism of Plastic Deformation of Titanium"

Ordzhonikidze, Izvestiya Vysshikh Uchebnykh Zavedeniy, Tsvetnaya Metallurgiya, No 6, 1972, pp 132-135

Abstract: A study was made of the mechanism of plastic deformation of two-component titanium-base alloys containing 0.2 and 2% Al, 0.1 and 0.3% O, and 0.1-1.25% Fe. Metallographic and structural x-ray investigations revealed that Ti-Al and Ti-O₂ alloys after annealing were in a one-phase alpha-state, but Ti-Fe alloys were in a three-phase state (alpha-solid solution, Ti-Fe, and residual beta-solid solution). Mechanical properties of the alloys, their microreliefs developing from static and dynamic loads, and the effect of Al, O, and Fe on the mechanism of plastic deformation are discussed. The introduction of up to 0.5% Fe decreased the relative elongation, lateral necking, and impact ductility; the ultimate strength increased 0.7 kg/mm² with the introduction of 0.1% Fe. Specimens with 1.25% Fe deformed under static loads by shifting on grain boundaries, sliding, and twinning. Intensive twinning is shown to develop in alpha-solid solutions under dynamic loads. Twinning secures the retention of impact ductility in alloying Ti with 0.5-1.25% Fe. 3 figures, 1 table, 3 bibliographic references.

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UDC 669.295:539.292

ODINOKOVA, L. P., and BRUSILOVSKIY, B. A., Kramatorsk Industrial Institute

"The Beta-Phase Decay on Continuous Cooling in Titanium-Iron Alloys"

Sverdlovsk, Fizika Metallov i Metallovedeniye, Vol 31, No 4, Apr 71, pp 713-718

Abstract: The beta-phase decay in Ti-Fe alloys, depending on the Fe-content (0.1-9.0%) and the cooling rate, was investigated by metallographic and roentgenostructural analyses and the variation of hardness. Roentgenograms were taken from specimens 0.8-1.0 mm in diameter, cut from heat-treated bars. Investigation results show the effect of heat treatment and the hardness HV, the phase composition, and the lattice parameter of beta-phase depending on Fe content. A mechanism of ω -phase development by direct beta-phase decay during continuous cooling is suggested and discussed. The development of the ω -phase in alloys with a near critical Fe-content (6% Fe) is indicated. Generalized investigation results, presented in diagrams of the anisometric beta-phase decay, show that in the alloy with 1% Fe the temperature interval of phase transformations shifts into the region of lower temperatures by increasing cooling rate. In the alloy with 9% Fe, only the diffusion

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ODINKOVA, L. P., and BRUSILOVSKIY, B. A., Fizika Metallov i Metallovedeniye, Vol 31, No 4, Apr 71, pp 713-718

beta-phase decay region with development of TFe and an alpha-phase by annealing is to be observed. The beta-phase supercools up to room temperature by normalization and hardening. Two figures, two tables, five bibliographic references.

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1/2 022 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--ON THE HISTOMORPHOLOGICAL CHARACTERISTICS OF SOME INCRETORY GLANDS
OF RATS IN FLUORINE INTOXICATION -U-
AUTHOR-(02)-ZHAVORONKOV, A.A., ODINOKOVA, V.A.

COUNTRY OF INFO--USSR

SOURCE--BYULLETEN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 49,
NR 6, PP 107-110
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--SODIUM COMPOUND, FLUORIDE, FLUOROSIS, THYROID GLAND,
PARATHYROID GLAND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3004/0573

STEP NO--UR/0219/70/049/006/0107/0110

CIRC ACCESSION NO--AP0131196

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0131196

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A SOLUTION OF SODIUM FLUORIDE IN DOSES OF 0.03, 0.1 AND 1.2 MG PER 100 OF BODY WEIGHT WAS DAILY INTRODUCED SUBCUTANEOUSLY TO 179 ALBINO RATS; AS CONTROL SERVED 26 RATS TO WHOM A SOLUTION OF SODIUM FLUORIDE WAS NOT INTRODUCED. THE AUTHORS INVESTIGATED THE THYROID AND PARATHYROID GLANDS DURING THE PERIOD OF INTOXICATION UP TO 206 DAYS IN THE FIRST TWO GROUPS AND UP TO 60 DAYS, IN THE THIRD GROUP AFTER THE SOLUTION ADMINISTRATION UP TO THE 135TH AND 123RD DAY IN RESPECTIVE GROUPS. IT WAS ESTABLISHED THAT FLUORINE IS ENDOWED WITH AN INSIGNIFICANTLY MARKED THYROSTATIC EFFECT. EXPERIMENTAL FLUOROSIS IN RATS IS ACCOMPANIED BY SECONDARY HYPERPARATHYROIDISM AND INCREASE IN THE NUMBER OF SPECIFIC LUCID THYROID CELLS PRODUCING THYROCALCITONIN. FACILITY: SCIENTIFIC RESEARCH INSTITUTE OF HUMAN MORPHOLOGY OF THE ACADEMY OF MEDICAL SCIENCES OF THE USSR, MOSCOW.

UNCLASSIFIED

1/2 028 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--THE INFLUENCE OF PYROGENAL ON THE LIVER OF RATS SUBJECTED TO THE
EFFECT OF CCL SUB4 -U-
AUTHOR-(04)-AVRAMENKO, M.M., ODINOKOVA, V.A., DROZDOVA, G.A., GLADYSHEV,
B.N.
COUNTRY OF INFO--USSR
SOURCE--BYULLETIN' EKSPERIMENTAL'NOY BIOLOGII I MEDITSINY, 1970, VOL 69,
NR 3, PP 43-46
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--ORGAN REGENERATION, LIVER, RAT, TOXICOLOGY, CARBON
TETRACHLORIDE, CYTOPLASM, GLYCOGEN, ALBUMIN, CHOLINESTERASE, ENZYME
ACTIVITY, BETA GLOBULIN, PYROGEN

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1982/0851

STEP NO--UR/0219/70/069/003/0043/0046

CIRC ACCESSION NO--AP0052285

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0052285

ABSTRACT/EXTRACT--(U) GP-0--

ABSTRACT. THE INFLUENCE OF PYROGENAL ON PROCESSES OF REGENERATION IN THE LIVER IN RATS WITH EXPERIMENTAL CCL SUB4 HEPATOSIS WAS STUDIED. AS THE RESULT OF PYROGENAL TREATMENT IN THE LIVER TISSUE OF ANIMALS THERE APPEARED SIGNS OF REGENERATION; THE NUMBER OF DIVIDING CELLS INCREASED, THERE APPEARED LARGE HEPATOCYTES WITH A SIGNIFICANT ACCUMULATION OF GLYCOGEN IN THE CYTOPLASM. THE EMPLOYMENT OF PYROGENAL WAS CONDUCTIVE TO NORMALIZATION OF THE PICTURE OF BLOOD SERUM PROTEINS, AN INCREASED CONTENT OF ALBUMINS AND A REDUCED CONTENT OF BETA GLOBULINS DOWN TO NORMAL VALUES. THERE WAS FOUND NO STATISTICALLY SIGNIFICANT CHANGES IN THE ACTIVITY OF CHOLINESTERASE AND HISTIDASE IN THE BLOOD SERUM AND IN THE HOMOGENATE OF HEPATIC TISSUE OF RATS RECEIVING PYROGENAL, IN COMPARISON WITH ANIMALS NOT GIVEN THE LATTER. DURING PYROGENAL TREATMENT IN THE PROCESS OF CCL SUB4 INTOXICATION THERE WAS NOTED A MORE RAPID NORMALIZATION IN THE CONTENT OF ALBUMINS AND BETA GLOBULINS OF THE BLOOD SERUM DURING RECOVERY.

UNCLASSIFIED

USSR

UDC 531.383

ODINTSOV, A. A., Kiev Polytechnical Institute

"The Geometrical Errors of a Magnetic Compass"

Leningrad, IVUZ Priborostroyenie, No 11, 1970, pp 86-89

Abstract: The article deals with the methodical errors brought about by inclinations of the compass card with respect to the plane of the horizon, and by the deviations of the course line from the vertical due to inclinations of the compass housing. 1 figure, 3 bibliographic entries.

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USSR

UDC: 531.01

ODINTSOV, A. A., BUBLIK, G. F.

"On the Problem of Improving the Response of a Gyrocompass With Indirect Control"

Vestn. Kiyev. politekhn. in-ta. Ser. priborostr. (Kiev Polytechnical Institute Herald. Instrument Building Series), 1970, No 1, pp 3-8 (from RZh-Mekhanika), No 7, Jul 71, Abstract No 7A99)

Translation: The paper deals with a scheme of a gyrocompass with indirect control, the axle of the outer frame being held in a torsion suspension. The authors determine the conditions under which the readings of the gyrocompass are independent of the effect of transport accelerations. It is shown that the period of natural undamped oscillations of the gyrocompass can be made less than the Schuler period without violating this condition. Authors' abstract.

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USSR

UDC 531.01

PAVLOVSKIY, M. A., ODINTSOV, A. A.

"On the Nature of the Motion of an Integrating Gyroscope Under Regular Tossing of the Base"

Dokl. Yubileyn. nauch.-tekhn. konferentsii Fak. avtomat. sistem. Tomsk. politekhn. in-t (Reports of the Jubilee Scientific-Technical Conference of the Faculty of Automatic Systems. Tomsk Polytechnical Institute), Tomsk, 1970, pp 47-53 (from RZh-Mekhanika, No 9, Sep 71, Abstract No 9A92)

Translation: The behavior of an integrating gyroscope under signal-frequency two-axial tossing of the base is discussed. The nonlinear differential equation with periodic coefficients that is discussed is solved by the harmonic balance method. Only a particular solution is investigated (higher harmonics are not taken into account). These results are compared with the data of other authors obtained using different methods of approximate integration of the equations of an integrating gyroscope. It is shown that under tossing of the base the difference in the output signals of two identical integrating gyroscopes with opposing rotors does not contain a constant component and is a periodic function of time. G. A. Slomyanskiy.

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1/2 030 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--ROLE OF MULTISTAGE EXCITATION OF OPERATING LEVELS IN AN ARGON LASER
-U-
AUTHOR--(03)--LEBEDEVA, V.V., MASHTAKOV, D.M., ODINTSOV, A.I.
COUNTRY OF INFO--USSR
SOURCE--OPTIKA I SPEKTROSKOPIIA, VOL. 28, FEB. 1970, P. 350-352
DATE PUBLISHED--FEB70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--ARGON LASER, ELECTRON GAS, CURRENT DENSITY
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1992/1480 STEP NO--UR/0051/70/028/000/0350/0352
CIRC ACCESSION NO--AP0112474
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0112474

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTAL INVESTIGATION OF AIMED AT MEASURING THE POPULATION OF THE UPPER LEVELS OF AN ARGON LASER AS A FUNCTION OF THE CURRENT STRENGTH AT A CONSTANT ATOM DENSITY IN THE CAPILLARY (ACHIEVED BY INCREASING THE PRESSURE IN PROPORTION TO THE INCREASE IN CURRENT DENSITY). UNDER THESE CONDITIONS, THE ELECTRON TEMPERATURE REMAINED CONSTANT. THE PRESSURE WAS DETERMINED AS THE SUM OF THE PARTIAL PRESSURES OF THE ATOMIC AND ELECTRON GASES. ELECTRON TEMPERATURE AND CONCENTRATION WERE CALCULATED FROM FORMULAS PROPOSED BY HERZIGER AND SEELIG (1968). CURVES RELATING THE PRESSURE AND CURRENT DENSITY IN THE CAPILLARY ARE PLOTTED, TOGETHER WITH CURVES SHOWING THE POPULATIONS OF THE LEVELS AS A FUNCTION OF THE CURRENT DENSITY.

UNCLASSIFIED

1/2 049 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--FINE STRUCTURE OF THE SUPERRADIATION SPECTRUM IN A PULSED NEON
LASER -U-
AUTHOR-(04)-KOROLEV, F.A., ABROSIMOV, G.V., ODINTSOV, A.I., YAKUNIN, V.P.
COUNTRY OF INFO--USSR
SOURCE--OPTIKA I SPEKTROSKOPIIA, VOL. 28, MAR. 1970, P. 540-542
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--FINE STRUCTURE, NEON, LASER PULSE, GAS LASER, LASER RADIATION
SPECTRUM, FABRY PEROT INTERFEROMETER, LINE SPLITTING, LASER PULSE LENGTH
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1996/1508 STEP NO--UR/0051/70/028/000/0540/0542
CIRC ACCESSION NO--AP0118495
UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118495

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. STUDY OF THE SPECTRAL COMPOSITION OF THE SUPERRADIATION ON THREE LINES OF A PULSED NEON LASER WITH WAVELENGTHS OF 6143, 5944, AND 5401 Å WITH THE AID OF A FABRY-PEROT INTERFEROMETER WITH A THICKNESS OF 10 AND 15 CM. THE SUPERRADIATION LINES ARE OBSERVED TO POSSESS A FINE STRUCTURE WHICH IN TYPICAL CASES CONTAINS FROM THREE TO SIX COMPONENTS WITH AN INTERVAL RANGING FROM 150 TO 400 MHZ BETWEEN NEIGHBORING COMPONENTS. THE WIDTH OF AN INDIVIDUAL COMPONENT RANGES FROM ABOUT 100 TO 200 MHZ, WHICH AGREES IN ORDER OF MAGNITUDE WITH THE SUPERRADIATION PULSE LENGTH (ABOUT 5 TO 8 NSEC). NO DEPENDENCE OF THE SPLITTING INTERVAL ON THE GEOMETRY OF THE DISCHARGE REGION, THE GAS PRESSURE, AND THE SIZE OF THE CHARGE CAPACITANCE IS FOUND. THE OBSERVED FINE STRUCTURE CANNOT BE ATTRIBUTED TO THE ISOTOPIC STRUCTURE OF NEON, SINCE THE NUMBER OF COMPONENTS AND THE DISTANCES BETWEEN THEM DO NOT CORRESPOND TO THE CHARACTERISTICS OF THE ISOTOPIC SHIFT IN NEON. IT IS SUGGESTED THAT THE COMPONENTS OF THE FINE STRUCTURE MAY BELONG TO SUPERRADIATIVE MODES OF THE PULSED LASER.

UNCLASSIFIED

1/2 027 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--EXCITATION OF HIGHER MODES OF A FABRY-PEROT RESONATOR BY AN
EXTERNAL TEM SUB 00 WAVE -U-
AUTHOR-(03)-KOROLENKO, P.V., ODINTSOV, A.I., TARASOVA, S.N.
COUNTRY OF INFO--USSR
SOURCE--OPTIKA I SPEKTROSKOPIIA, VOL. 28, MAR. 1970, P. 518-523
DATE PUBLISHED----MAR70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--RESONATOR, WAVE FRONT, EXCITED STATE, EXCITATION ENERGY,
SPHERIC GEOMETRY, ELECTROMAGNETIC WAVE ABSORPTION
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1996/1435 STEP NO--UR/0051/70/028/000/0518/0523
CIRC ACCESSION NO--AP0118424

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0118424

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. EXPERIMENTAL MEASUREMENT OF THE CONVERSION COEFFICIENTS CHARACTERIZING THE EXCITATION OF HIGHER MODES OF A FABRY-PEROT RESONATOR BY AN EXTERNAL TEM SUB 00 WAVE. IT IS SHOWN THAT IN THE PRESENCE OF A MISMATCH BETWEEN THE RADIUS OF CURVATURE OF THE WAVEFRONT AND THE BEAM DIAMETER IN A SPHERICAL FABRY-PEROT RESONATOR EXCITED BY AN EXTERNAL TEM SUB 00 WAVE EXCITATION OF HIGHER TEM SUB 00 MODES WITH SPHERICAL GEOMETRY IS OBSERVED. IF THE MISMATCH IS CAUSED BY A DISTURBANCE OF THE COAXIALITY WITH THE INCIDENT BEAM, HIGHER TEM SUB 00 MODES WITH RECTANGULAR GEOMETRY ARE EXCITED. FOR EACH MODE THERE IS A SPECIFIC OPTIMAL DEGREE OF MISMATCH, AT WHICH ITS INTENSITY REACHES A MAXIMUM. THE OPTIMAL DEGREE OF MISMATCH INCREASES WITH AN INCREASE IN THE MODE INDEX.

UNCLASSIFIED

AA0052689

ODINTSOV L.A. UR 0482

Soviet Inventions Illustrated, Section III Mechanical and General,
Derwent, J-10

244207 TRENCH EXCAVATOR comprises rotor with buckets. It is distinguished by providing the bucket terminal sections with longitudinal walls 3,5. One of them 3 is made at right angles to the bucket bottom 4, whereas the lower part of the other is made at an angle. This excludes the shock action from the walls of the pipe opening device.

10.2.68. as 1217820/29-14, ODINTSOV, L.A. et al.
(8.10.69) Bul 17/14.5.69. Class 84d, Int. Cl.
E 02f.

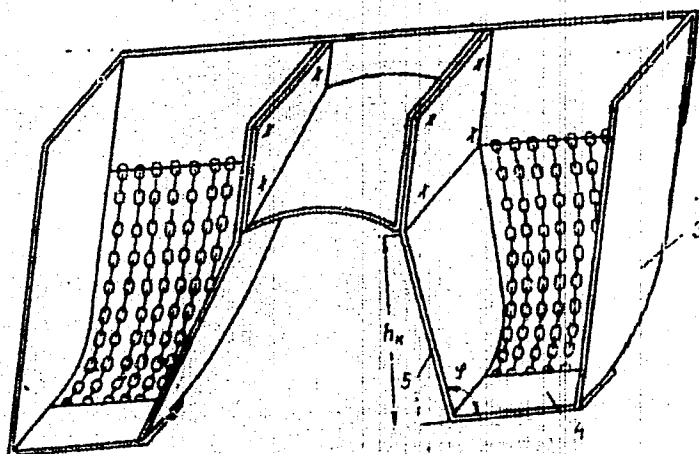
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AA0052689

Odintsov, L.A.; Belov, B.F.;
Rashchepkin, K.Ye.; Berdnikova, Z.K.; Bakiyeva, O.Z.



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USSR

UDC 621.374.4(088.8) 4

KURMAYEV, A. ZH., MIKHAYLOV, A. M., GEL'BSHTEYN, L. S., SLAVNIN, V. A., ODINTSOV, L. N., KOZLOV, A. I., KOROLEVA, R. A., STEEL'NIKOV, A. D.

"Pulse Repetition Rate Dividing Circuit"

USSR Author's Certificate No 277845, Filed 9 Jan 69, Published 20 Oct 70 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4G247P)

Translation: A frequency dividing circuit is proposed, which contains a cycle signal source, a square-wave source, a switch in the cycle signal circuit, a frequency divider and a comparison circuit. In order to improve the noise resistance of the cycle pulse time selection in the presence of low frequency noise, the device is also equipped with a pulse converter included between the divider and the comparison circuit. The converter output is connected to the control input of the switch in the cycle pulse circuit.

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1/2 007 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--GENERAL FEATURES OF THE GEOLOGICAL HISTORY OF THE WEST OF AFRICAN
AND SIBERIAN PLATFORMS -U-
AUTHOR--(04)-VLADIMIROV, B.M., ODINTSOV, M.M., RASSKAZCHIKOV, A.N.,
TVERDOKHLEBOV, V.A.
COUNTRY OF INFO--USSR
SOURCE--GEOLOGIYA I GEOfIZIKA, 1970, NR 1 (121) PP 50-56
DATE PUBLISHED-----70
SUBJECT AREAS--EARTH SCIENCES AND OCEANOGRAPHY
TOPIC TAGS--STRUCTURAL GEOLOGY, MAGMA, OROGENY
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DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAmE--1986/1318 STEP NO--UR/0210/70/000/001/0050/0056
CIRC ACCESSION NO--AP0103200
UNCLASSIFIED

2/2 007

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0103200

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MAIN FEATURES OF GEOLOGICAL STRUCTURE OF THE BASEMENT, SEDIMENTARY COVER AND MAGMATISM OF THE WEST AFRICAN CRATON AND LIBYAN NIGERIAN OROGENIC BELT ARE CONSIDERED. THEIR BELONGING TO THE SINGLE WEST AFRICAN COMPLICATED EPIBAIKALIAN PLATFORM STRUCTURE WITH DIFFERENT AGE OF HETEROGENE BASEMENT IS ESTABLISHED. THE ANALOGOUS FEATURES OF GEOLOGICAL DEVELOPMENT OF THE WEST AFRICA AND SIBERIAN PLATFORM WITH INCLUDED BAIKALIDES ARE ESTABLISHED BY COMPARATIVE ANALYSIS.

UNCLASSIFIED

USSR

UDC: 621.374.5

ODINTSOV, V. I., Moscow "Order of Lenin" Aviation Institute imeni Sergo
Ordzhonikidze

"A Converter Which Changes Pulse Amplitude to a Time Interval"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztzy, Tovarnyye Znaki,
No 7, Mar 72, Author's Certificate No 329661, Division H, filed 1 Jul 70,
published 9 Feb 72, p 222

Translation: This Author's Certificate introduces a converter which changes pulse amplitude to a time interval. The device contains a comparison circuit, a current-stabilizing device and a charging network made up of an amplifier, a diode and a storage capacitor. As a distinguishing feature of the patent, the converter is simplified and its speed is increased by connecting the common tiepoint between the storage capacitor, diode and current-stabilizer to the emitter of the input transistor, while the output of the comparison circuit is connected through a feedback capacitor to the current stabilizer.

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1/3 050 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--EXCITATION OF STIMULATED RAMAN SPECTRA IN LIQUIDS DURING THE
MODULATION OF LASER QUALITY BY THE SUBSTANCE BEING STUDIED -U-
AUTHOR--(04)--KOROLEV, F.A., BASKAKOVA, Z.A., ZAKHAROVA, T.S., ODINTSOV,
V.I.
COUNTRY OF INFO--USSR
SOURCE--PIS'MA ZH. EKSP. TEOR. FIZ. 1970, 11(6), 295-7
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--RAMAN SPECTRUM, LIGHT SCATTERING, LASER MODULATION, RUBY
LASER, BENZENE, CARBON TETRACHLORIDE, CYCLOHEXANE, LASER PULSE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--2000/1170 STEP NO--UR/0386/70/011/006/0295/0297
CIRC ACCESSION NO--AP0124825
UNCLASSIFIED

2/3 050

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC- ACCESSION NO--AP0124825

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. ON THE BASIS OF REVERSE STIMULATED MANDELSTAM BRILLOUIN (MB) LIGHT SCATTERING, WHICH LEADS TO REFLECTION OF A CONSIDERABLE PART OF THE INCIDENT LIGHT OUTSIDE OF THE LASER, MODULATION OF LASER QUALITY WAS ACHIEVED. WITH AN EXPTL. EQUIPMENT COMPOSED OF A MIRROR, RUBY CRYSTAL (120 MM), FOCUSING LENSE, CELL 940 CM), AND SPECTROGRAPH, THE EFFECT OF BENZENE (I), CYCLOHEXANE (II), AND CCL SUB4 (III) WAS STUDIED. ENERGY OF A SINGLE PULSE INCIDENT ON THE SUBSTANCE WAS SIMILAR TO 1.5 J. FOR I AND II, SIMILAR TO 1.2 FOR III. HALF WIDTH OF THE PULSE DURATION WAS SIMILAR TO 25 NSEC FOR I AND II, SIMILAR TO 20 FOR III. SPECTRAL STUDIES SHOWED THE PRESENCE OF 4-5 COMPONENTS OF MB LIGHT SCATTERING, LINEWIDTH OF SINGLE COMPONENT WAS SIMILAR TO 10 PRIME NEGATIVE2 CM PRIME NEGATIVE1 (WHICH IS CONSIDERABLY LOWER IN COMPARISON WITH THE LINEWIDTH IN THE REGIME OF FREE GENERATION, 0.35 CM PRIME NEGATIVE1). IN I 4 STOKES EMISSION COMPONENTS WITH A SHIFT OF 992 CM PRIME NEGATIVE1 WERE EXCITED (THE POWER OF THE 2ND WAS HIGHER THAN 15 MW.). IN II 2 STOKES COMPONENTS WERE EXCITED CORRESPONDING TO THE MOL. VIBRATION 2852 CM PRIME NEGATIVE1 (THE MOST INTENSE COMPONENT IS SIMILAR TO 20 MW.), 2 COMPONENTS OF THE VIBRATION 801 CM PRIME NEGATIVE1, AND 2 COMBINATION STOKES FREQUENCIES WITH SHIFT (2852 PLUS 801) AND (2 TIMES 2852 PLUS 802) CM PRIME NEGATIVE1. IN III 4 STOKES COMPONENTS WITH SHIFT 459 CM PRIME NEGATIVE1 WERE EXCITED (THE 2ND WITH SIMILAR TO 10 MW.). HIGHER POWER OF THE EXCITING PULSE AND MORE EFFECTIVE EXCITATION OF THE RAMAN SPECTRA WERE FOUND THAN WITH EQUIPMENT USING A SATURABLE ABSORBER FOR THE MODULATION OF LASER QUALITY.

UNCLASSIFIED

3/3 050
CIRC ACCESSION NO--AP0124825
ABSTRACT/EXTRACT--FACILITY:
USSR.

UNCLASSIFIED

PROCESSING DATE--30OCT70

MOSK. GOS. UNIV. IM. LOMONOSOVA, MOSCOW,

UNCLASSIFIED

USSR

UDC: 632.95

ODINTSOV, V. S.

"Biochemical Fundamentals of Using Organophosphorus Insecticides"

Kiev, Biokhimicheskoye osnovy primeneniya fosfororganicheskikh inektitsidov (cf. English above), "Nauk. dumka", 1972, 175 pp, ill. 1 r. 80 k. (from RZh-Khimiya, No 10, May 73, abstract No 10N551 K by T. A. Belyayeva)

Translation: The monograph contains the following sections: 1) a brief historical survey on insect esterases as applied to organophosphorus insecticides; 2) experimental data on the part played by insect esterases in the mechanism of the toxic action of organophosphorus insecticides (dynamics of the activity of insect esterases in ontogenesis; antiesterase and insecticidal action of some organophosphorus insecticides on phylogenetically distinct families of insects of the order Diptera; histochemical study of localization of the activity of esterases in the central nervous system of insects; cytochemical study of localization of the activity of esterases in the separate structural elements of the central nervous system of insects; investigation of electrophoresis in polyacrylamide gel); 3) practical testing of toxic action of some foam insecticides on insects.

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USSR

UDC 577.153.595.771+661.718.1

~~ODINTSOV, V. S.~~

Biokhimicheskiye Osnovy primeneniya fosfororganicheskikh insektitsidov
(Biochemical Bases of the Application of Organophosphorus Insecticides), Kiev,
Naukova dumka, 1972, 173 pp.

Annotation

The monograph discusses the latest contemporary concepts of the physiological and biochemical mechanism of the toxic effect of organophosphorous insecticides (OPI) and critically examines literature data on the study of esterases of insects by various methods, and analyzes the toxicological and antiesterase action of various OPI and data on the dynamics of the activity of esterases in the ontogenesis of phylogenetically different families of dipterous insects, on the determination of the localization of esterases in the central nervous system of insects at the histo- and cytological levels, and on the physicochemical properties of esterases.

The book is intended for entomologists, biochemists, histologists, cytologists, epidemiologists, disinfection specialists, and chemists working on the development and testing of insecticides.

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Organophosphorus Insecticides

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ODINTSOV, V. S., Naukova dumka, 1972, 173 pp

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USSR

UDC 632.95

ODINTSOV, V. S., PETRENKO, V. S., TERTYSHNYY, V. N., KHARSUN, A. I.

"Enzymes -- Targets of Organophosphorous Insecticides in the Metamorphosis of Flies"

Fiziol. aktivn. veshchestva. Resp. mezhved. sb. (Physiologically Active Substances. Republic Interdepartmental Collection), 1972, vyp. 4, pp 26-28 (from RZh-Khimiya, No 2 (II), Feb 73, Abstract No 2N474)

Translation: In order to discover the relation between the activity of esterases and the physiological activity of insecticides with respect to insects a study was made of the nature of the activity dynamics of acetylcholinesterase, carboxylesterase and arylesterase in larvae, pupae and winged houseflies during ontogenesis. The colorimetric hestrine method was used to establish the high activity of the three esterases in the given steps of metamorphosis. The weak physiological activity of organophosphorous compounds in the individual stages of metamorphosis, in particular, the pupae, is explained not by the absence of active enzymes -- targets -- but by a peculiarity of pupal metamorphosis (a nonfeeding phase) and the physical-chemical properties of the compounds. The necessity for using strongly fumigating organophosphorous insecticides for successful control of the pupae stage of development of insects is demonstrated.

USSR

UDC 621.039

SHIKHOV, S. B., IGNATOV, A. A., and ODINTSOV, V. S.

"Solution of the Problem on Radiation Transfer With Representation of the Continuous Portion of the Spectrum of the Transfer Operator by Discrete Points"

V sb. Fiz. yadern. reaktorov (Physics of Nuclear Reactors -- Collection of Works), No 2, Moscow, Atomizdat, 1970, pp 82-90 (from RZh-Fizika, No 4, Apr 71, Abstract No 4V547)

Translation: Application of the Case method to transport problems is made difficult by the fact that to find the coefficient $\Lambda(v)$ in the integral term one must solve a singular integral equation. An approximation method is proposed for solving the singular integral equation based on representing the integral term in the interval $v \in (-1, 1)$ by a finite sum; the points of division of the interval v_i , $i = 1-n$ are roots of the equation $h_N(v) = 0$, where $h_N(v)$ is the N-th moment of the expansion of the elementary solution of $\phi(v, \mu)$ in Legendre polynomials. N is greater than or equal to the order of anisotropy of the scattering nucleus. The problem of the passage of neutrons through a multilayered plate was solved by this method

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USSR

SHIKHOV, S. B., et al, Fiz. yadern. reaktorov (Physics of Nuclear Reactors -- Collection of Works), No 2, Moscow, Atomizdat, 1970, pp 82-90 (from RZh-Fizika, No 4, Apr 71, Abstract No 4V547)

in the transport approximation. A Green's function was constructed for any layer, and the relationship was derived between the angular moments $\psi_k(\chi, \mu)$ for two different layers. The boundary conditions are achieved approximately by the Marshak method or for a number of discrete directions. A. G. Promokhov.

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USSR

UDC 591.8:577.4:591.481:595.774

ODINTSOV, V. S., TERTYSHNYY, V. N., and ALEKSYENKO, I. P., Institute of Organic Chemistry, Academy of Sciences Ukrainian SSR, Kiev

"Localization of Acetylcholinesterase Activity in the Central Nervous System of Larvae of Blood-Sucking Gnats (Diptera: Simuliidae) Developing in Winter."

Moscow, Doklady Akademii Nauk SSSR, Vol 190, No 1, Jan/Feb 70, pp 224-226

Abstract: Young larvae of blood-sucking gnats (species *Odagmis*), obtained from forest ponds and streams in the Kiev area in January, 1969, were used. With the help of specially prepared needles, the nervous network was exarticulated from the larvae, placed in icecold distilled water, and (after fixation) incubated in a medium from which $Pb(NO_3)_2$ was excluded. Acetylthiocholine iodide was used as a substrate. Hydrogen sulfide in Ringer solution was used to impart a dark-brown color to the colorless copper thiocholate. The nervous network was then washed with distilled water, treated with 10% neutral formalin, washed again, and embedded in glycerin-gelatin. In control experiments, the nervous network prior to incubation was

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USSR

ODINTSOV, V. S., et al., Moscow, Doklady Akademii Nauk SSSR, Vol 190, No 1, Jan/Feb 70, pp 224-226

treated with eserine. Microphotography showed that the dark-brown zones in the ganglia and connectors of the central nervous system of the larvae are areas of localization of the greatest acetylcholinesterase activity, leading to the conclusion that the intensity of the coloration may serve as a criterion of the intensity of acetylcholinesterase activity. It was histochemically established that acetylcholinesterase is highly active in certain zones of all ganglia of the central nervous system, particularly in the areas of the neuropil, synaptic connections, and peripheral zones. Slight coloration in other zones of the ganglia is an indication of low acetylcholinesterase activity. The high acetylcholinesterase activity in the central nervous system of the wintering larvae of gnats indicates that the property of continuous development is characteristic of this species, and is responsible for the large increase of the spring population of these particularly vicious blood-sucking insects.

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TECHNOLOGY OF PRODUCING NEW MATERIALS

JPRS 59873
25 August 1973

(23)

Translation of Russian-language collection: Tekhnologiya
Polucheniya Novykh Materialov, 1972, Kiev.

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25 Aug 75

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USSR

UDC 669.781.053.28

LADERNO, Yu. B., ODINTSOV, V. V.

"Production of Metal Dodecaborides by Borothermal Reduction of Metal Oxides"

Metalloterm. Protsessy v Khimii i Metallurgii, [Metallothermal Processes in Chemistry and Metallurgy -- Collection of Works], Novosibirsk, Nauka Press, 1971, p 39-43. (Translated from Referativnyy Zhurnal Metallurgiya, No 3, 1972, Abstract No 3G143 by the authors).

Translation: Studies are performed of the production of metal dodecaborides by reduction of metal oxides in a vacuum using a charge with an excess of B. Single-phase dodecaborides with UB_{12} structure are formed when the initial charge contains 4-6 % excess B, which apparently results from defects in the metal dodecaboride lattices. 2 tables; 11 biblio refs.

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UDC 656.25.071.84.002.56

USSR

SHAYEVSKIY, N. A., GIL'BURD, L. M., Chief Designers of the Odessa Branch of the Central Design Office of the Ministry of Railways, ODINTSOVA, A. I., GOL'DSHTEYN, V. P., Design Engineers

"IKI-ST Meter for Fringe Distortions of Telegraph Signals"

Moscow, Avtomatika, Telemekhanika i Svyaz', No 10, 1971, pp 11-14

Abstract: The technical specifications, operating conditions, speed control conditions, and transmitter contact regulation of the IKI-ST meter which measures fringe distortions of telegraph signals with high accuracy are discussed. The meter has been prepared for series production at the Odessa Promsvyaz' Plant. It is designed to measure the distortions of single-current and double current signals code No 2, to regulate the transmitter contacts of the telegraph set, and to monitor and control the telegraph speed. Provision is made to measure distortions at speeds of 50, 75 and 100 baud. The measurement of the start-stop distortions is based on the start-stop method of receiving code combinations and comparison of the proposed characteristic modulation times developed by the meter with the actual reproduction times of the signal reaching the inputs of the meter. The operation of the device is illustrated by diagrams.

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UDC 582.28+632.4

USSR

ODINTSOVA, I. G., All-Union Scientific Research Institute of Plant Growing
imeni N. I. Vavilov

"Race Differentiation of Phytopathogenic Fungi in Relation to the Genetics of
Virulence"

Leningrad, Mikologiya i Fitopatologiya, No 6, 1971, p 538

Abstract: In this paper, read before the Mycology Section of the All-Union Botanical Society (23 March 1971), the author notes that the standard set of varieties of Steckman differentiators for brown rust of wheat contains only 5 genes out of 18 now known in North America. Thus, this set differentiates the fungus population on the basis of 5 virulence genes from the 18 in existence. The use of other differentiators along with the standard set would greatly improve the value of race analysis of pathogens for breeding resistant plants. The best approach is to use a differentiating set of monogenic strains in which each strain contains one resistance gene. As the gene loses effectiveness, the corresponding strain can be eliminated from the series and, conversely, a series can be replenished with new strains as new genes are discovered.

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1/3 038

UNCLASSIFIED

PROCESSING DATE--020CT70

TITLE--GEOACTIVITY OF SOLAR FLARES AS A FUNCTION OF BRIGHTNESS OF METAL
LINES IN THEIR SPECTRA, GEOACTIVITY OF SOLAR FLARES -U-
AUTHOR--(021)-UDINTSOVA, I.N., SHILOVA, N.S.

COUNTRY OF INFO--USSR

SOURCE--MOSCOW, GEOMAGNETIZM I AERONOMIYA, VOL X, NO 2, 1970, PP 326-328

DATE PUBLISHED-----70

SUBJECT AREAS--ASTRONOMY, ASTROPHYSICS, EARTH SCIENCES AND OCEANOGRAPHY

TOPIC TAGS--SOLAR FLARE, LUMINESCENCE, SOLAR DISC, SOLAR LIMB, IONIZING
RADIATION, IONOSPHERE, RADIO EMISSION, SOLAR ATMOSPHERE, METAL,
GEOACTIVITY, GEOMAGNETISM, GEOMAGNETIC DISTURBANCE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
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STEP NO--UR/0203/70/010/002/0326/0328

CIRC ACCESSION NO--AP0109654

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--02OCT70

3/3 038

CIRC ACCESSION NO--AP0109654

ABSTRACT/EXTRACT--WHEN THE INTENSITY OF LUMINESCENCE OF METALS IS GREATER THAN 1PLUS RADIO BURSTS ARE STRONGEST IN THE CENTIMETER RANGE; WHEN THE BRIGHTNESS OF METALS IS LESS THAN 1PLUS RADIO BURSTS IN THE METER RANGE CAN BE STRONGER THAN BURSTS IN THE CENTIMETER RANGE. STRONG LUMINESCENCE OF METALS OCCURS PRIMARILY IN THE DENSE LAYERS OF THE SOLAR ATMOSPHERE SINCE IN THE CASE OF STRONG LUMINESCENCE THE STRONGEST RADIO EMISSION IS IN THE CENTIMETER RANGE, WHEREAS METER RADIO EMISSION EMANATES FROM OUTER LAYERS OF THE SOLAR ATMOSPHERE. THE MOST GEDEFFECTIVE FLARES ACCOMPANIED BY STRONG EMISSION OF METALS THEREFORE ARISE IN THE LOWER LAYERS OF THE SOLAR ATMOSPHERE.

UNCLASSIFIED

UDC 539.374

USSR

ODISHVILI, K. A.

"Optimal Laws for the Change in the Thickness of a Flat Shell of Rotation"

Tr. TsNII stroit. konstruktsiy (Works of the Central Scientific Research Institute of Structural Parts), 1971, No. 19, pp 113-118 (from RZh-Mekhanika, No 6, Jun 72, Abstract No 6V426)

Translation: The problem of determining the law for the change in thickness of an ideally plastic shell of rotation is considered under the condition that the minimum of the integral of the square of the thickness of the shell over the entire surface be the criterion for optimality. Use of the Mises condition in conjunction with the assumption that the quality of annular and meridional forces makes it possible to reduce the problem of optimization of such a shell to a problem in the theory of optimal systems in which no restrictions are imposed on the equations. This problem is reduced in turn to the solution of a system of linear auxiliary equations under the appropriate boundary conditions. Values for impulses in terms of which annular and meridional bending moments are easily expressed are obtained as a result

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USSR

ODISHVILI, K. A., Tr. TsNII stroit. konstruktsiy, 1971, No. 19, pp 113-118

of the solution. The parameter based on the assumption that the annular and meridional forces are equal is found after this from the condition that the Hamiltonian is equal to zero, which follows from the maximum principle. Diagrams of the thicknesses and moments for two examples of hollow spherical shells with an opening are given. M. I. Reytnan.

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1/2 010

UNCLASSIFIED

PROCESSING DATE--27NOV70

TITLE--POLYAMIDE INDOLE -U-

AUTHOR--(04)-KIDRYANSEV, G.I., ODNORALOVA, V.N., NAZIMOVA, N., SHABLYGIN, M.V.

COUNTRY OF INFO--USSR

SOURCE--VYSOKOMOL. SOEDIN., SER. B 1970, 12(5), 371-3

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--CONDENSATION REACTION, AMIDE, INDOLE DERIVATIVE, TOLUENE, CHLORINATED ORGANIC COMPOUND, AROMATIC ANINE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3006/1233

STEP NO--UR/0460/70/012/005/0371/0373

CIRC ACCESSION NO--AP0134907

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--27NOV70

2/2 010
CIRC ACCESSION NO--AP0134907
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE POLYCONDENSATION OF
ISOPHTHALOYL DICHLORIDE WITH 2,4-DIAMINOTOLUENE GAVE I, WHICH WAS
CYCLIZED TO II BY SWELLING I FILMS IN ETONA OR AC SUB2 O AND HEATING
THEM TO 340DEGREES IN VACUO. I AND II LOSE LESS THAN OR EQUAL TO 5 WT.
PERCENT DURING HEATING IN AIR AT LESS THAN OR EQUAL TO 400DEGREES. THE
WT. LOSS OF II REACHED 15PERCENT AT 460DEGREES. I IS NOT SOL. IN AMIDES
OR CONCD. H SUB2 SO SUB4. FACILITY: VSES. NAUCH.-ISSLED. INST.
ISKUSSTV. VOLOKNA, MYTISHCHI, USSR.

UNCLASSIFIED

UDC 536.46 + 662.222.2

1

USSR

KSANDOPULO, G. I., KOLESNIKOV, B. Ya., ZAVADSKIY, V. A., ODNOROG, D. S.,
YELOVSKAYA, T. P., Alma-Ata

"Mechanism of Inhibition of Combustion of Hydrocarbon-Air Mixtures by Finely
Dispersed Particles"

Fizika Goreniya i Vzryva, No 1, Mar 71, pp 92-99.

ABSTRACT: Inhibited atmospheric propane flames were studied by the method of sampling from the flame using a quartz microtube to take samples for mass-spectrometer analysis. The reaction was quenched in the samples taken in less than 50 μ sec by the adiabatic expansion of the stream of sampled gases moving through the capillary into the sample chamber. Analysis of the concentration profiles formed in the reaction zone of the flame indicate that the first summary process is that of fractionation of the initial fuel molecules. As the concentration of propane decreases, the concentration of its fragments increases. The process of inhibition by solid particles is reduced on the one hand to accelerated formation of formaldehyde and on the other hand to inhibition of its loss by recombination of the OH radical on the surface of the solid particles. The change in the effectiveness of inhibition is in proportion to the total surface area of particles and depends on their nature. This proves the heterogeneous mechanism of inhibition of combustion.

1/1

1/2 006 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--CHLOROMETHYLATION OF ALIPHATIC AROMATIC KETONES -U-
AUTHOR--(03)-ODOYEVA, G.A., EPSHTEYN, G.L., SOCHILIN, YE.G.
COUNTRY OF INFO--USSR
SOURCE--ZH. ORG. KHIM. 1970, 6(3), 478-80
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--ALKYLATION, CHLORINATION, ALIPHATIC KETONE, AROMATIC KETONE

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1992/1672 STEP NO--UR/0366/70/006/003/0478/0480
CIRC ACCESSION NO--AP0112666
UNCLASSIFIED

2/2 006

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0112666

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE CHLOROMETHYLATION OF PHCOME, 4,CLC SUB6 H SUB4 COME, OR 3,4,ME SUB2 C SUB6 H SUB3 COME IN THE PRESENCE OF H SUB3 PO SUB4 GAVE 58-61PERCENT RCOCH SUB2 CH SUB2 CL (R IS PH, 4,CLC SUB6 H SUB4, OR 3,4,ME SUB2 C SUB6 H SUB3). HOWEVER, THE CHLOROMETHYLATION OF 2,4,6,ME SUB3 C SUB6 H SUB2 AC GAVE 70PERCENT 2,4,6,3,ME SUB3 (CLCH SUB2) C SUB6 HAC, DUE TO HINDERING BY ME GROUPS IN 2,6 POSITIONS. FACILITY: LENINGRAD. TEKHNOLOG. INST. IM. LENSOVETA, LENINGRAD, USSR.

UNCLASSIFIED

UDC 582.263.093.3

USSR

ODOYEVSKAYA, N. S., Institute of Microbiology, Academy of Sciences USSR

"Use of Broad-Spectrum Light Filters for Culturing *Chlorella vulgaris*"

Moscow, Mikrobiologiya, No 3, 1970, pp 410-413

Abstract: The effect of colored Plexiglas light filters on the formation of *Chlorella vulgaris* biomass and pigments was studied. The number of cells almost doubled when the intensity of the illumination was increased from 2,000 to 6,000 lux. The accumulation of pigments also increased, but not to the same extent as the number of cells. The spectral composition of the light had an effect only at 2,000 lux. The content of carotenes and chlorophylls a and b was highest when a blue and especially a red filter was used, and lowest when a green filter was used. The effect of more intense light (6,000 lux) on the pigment composition and yield was less pronounced.

1/1

USSR

UDC 669.295.018.9(088.8)

TURKINA, A. N., ODOYEVSKIY, I. S., KHAZANOVA, T. P., KARSANOV, G. V.,
ANOSHKIN, N. F., TSISTYAKOV, Ye. P., PAVLOV, A. G., TRUBIN, A. N., and
TETYUKHIN, V. V.

"Master Alloy for Production of High-Strength Titanium Alloys"

USSR Author's Certificate No 309061, filed 15/07/69, published 20/09/71
(Translated from Referativnyy Zhurnal Metallurgiya, No 3, 1972, Abstract
No 3G159P by G. Svodtseva)

Translation: A master alloy for the production of high-strength Ti alloys,
containing Mo, V, and Al. To increase the quality of the ingots produced,
the alloy includes Cr and Fe with the following relationships of components
(in %): Mo 32-34, V 32-34, Al 18-22, Cr 6-8, Fe 5-7. The master alloy can
be produced either by direct smelting of the metals in an open induction
furnace or by an aluminothermal method in a furnace.

1/1

- 58 -

USSR

UDC 621.375.82

MANUIL'SKIY, A. D., ODULOV, S. G., SOSKIN, M. S.

"A New Method for Studying Heterogeneously Broadened Spectra of the Active Media of Lasers"

V sb. Peredacha energii v kondensirovan. sredakh (Energy Transfer in Condensed Media -- Collection of Works), Yerevan, 1970, pp 116-124 (from RZh-Fizika, No 7, Jul 71, Abstract No 7D1059)

Translation: The generation of silicate (LGS-24/2) and phosphate (KGSS-56) glasses in a cavity resonator in which many excited internal modes are closed to internal reflection from the polished surfaces of the sample is investigated. It was observed that with a lowering of temperature the total width of the spectra increases greatly. The dependence of the magnitude of homogeneous broadening of luminescence in the 1.06 μ band on temperature in both glasses was derived on the basis of temperature measurements of the width of the generation spectrum. It was observed that with a lowering of temperature the homogeneous width does not tend to zero, but in the high-temperature region the homogeneous expansion is accelerated. In phosphate glass the dependence of the homogeneous broadening on temperature is considerably weaker than in silicate glass. It is concluded that homogeneous broadening in glasses is determined basically by direct interaction with fluctuations in the matrix, and the width observed is related to broadening of the final level of the transition. The change in the rate of energy transfer between Nd^{3+} at various temperatures is discussed. V. N. Sh.

1/1

USSR

UDC: 621.373.530.145.6

MANUIL'SKIY, A. D., ODULOV, S. G., SOSKIN, M. S.

"A New Method of Studying Nonuniformly Broadened Spectra of Active Laser Media"

V sb. Peredacha energii v kondensirovan. sredakh (Energy Transmission in Condensed Media--collection of works), Yerevan, 1970, pp 116-124 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D212)

Translation: The authors studied emission of silicate and phosphate glasses activated by trivalent neodymium cation in the 1.06 μ region. The emission spectrum produced by these specimens over a wide temperature range is typical of spectrally nonhomogeneous media. The temperature dependence of homogeneous broadening of the spectrum of an individual ion is determined. It is shown that when the temperature falls, the uniform width of transitions of trivalent neodymium cations on the investigated segment of the frequency band of luminescence does not tend to zero. In the high-temperature region, the increase in uniform broadening is accelerated. It was found that the uniform width of the spectrum in these glasses is determined chiefly by interactions with lattice vibrations. A. K.

1/1

Construction

UDC 539.4:624

USSR

ODUZHEV, F. M., and KULIYEV, R. A.

"The Strength and Deformability of Stone, Vibrostone, and Expanded-Clay-Foam-Concrete Panels Under the Action of Static and Cylindrical Loads, Which Brings About Skewing in their Plane"

Moscow, Vses. Soveshch. "Proyektir. i Str-vo Seysnostoyk. Zdanly i Sooruzh.," 1971 (All-Union Conference "Designing and Construction of Earthquake-Proof Building and Structures," 1971), pp 87-93 (from Referativnyy Zhurnal, Mekhanika, No 2, Feb 72, Abstract No 2V1050 by M. Kh. Leybur)

Translation: The procedure and results of experimental research are presented on determination of the calculation parameters of the piecewise and vibratory placement of sawable limestone and expanded-clay-foam-concrete panels. Research on the resistance of conventional and vibratory placement to skewing was conducted basically on samples with the side ratio $\beta = a/b = 0.63 \text{ -- } 1.6$ and the foam concrete panels had $\beta = 1$. The testing procedure was identical. The load was applied to the samples along one of their diagonals. Failure of all the samples started with the formation of cracks along the compressed diagonal. Loss of the carrying capacity of the placement samples occurred with the formation of cracks along the horizontal seams. Nonvibrated samples with $\beta = 0.63$ broke
1/2

Luminescence

UDC 541.138.2:546

USSR

GARDIN, YU. YE., KULABUKHOV, V. M., ODYNETS, L. L., PERSHINA, G. A., Petro-zavodsk State University Imeni O. V. Kuusinen

"Mechanism of Galvanoluminescence During Anodic Polarization of Aluminum Oxide"

Moscow, *Elektrokhimiya*, Vol VII, No 8, 1971, pp 1184-1185

Abstract: A study was made of the spectral composition of the galvanoluminescence during anodic polarization of systems made up of aluminum, aluminum oxide and an electrolyte. The oxide layer was obtained by anodic oxidation of aluminum (99.99% pure) in two different electrolytes: a) an aqueous solution of boric acid (30 g/liter) with borax (0.05 g/liter) and b) an aqueous solution of oxalic acid (30 g/liter). The galvanoluminescence spectra are plotted for the two given cases. In two series of experiments the structure of the oxide layers remained invariant; however, the galvanoluminescence spectra corresponded to the electrolyte in which the measurement was taken. The results obtained agree with the previously stated proposition [S. P. Maminova, *Elektrokhimiya*, No 1, 365, 1965] that in systems made up of a metal (semiconductor) oxide and electrolyte galvanoluminescence

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USSR

GARDIN, YU. YE., et al, Elektrokimiya, Vol VII, No 8, 1971, pp 1184-1185

constitutes electrochemical luminescence and is connected with electrochemical reactions at the oxide/electrolyte interface.

2/2

- 26 -

USSR

UDC 37.521.7:621.315.61

ODYNETS, L. I., PLATONOV, F. S., PROKOPCHUK, Ye. M.

"Electrical Breakdown of Oxide Films on Aluminum"

Moscow, Radiotekhnika i Elektronika, Vol 26, No 9, Sep 71, pp 1739-1740

Abstract: The authors studied the electrical breakdown of Al_2O_3 films made by anodizing 99.996% pure aluminum in an aqueous solution of boric acid (30 grams per liter) and sodium tetraborate (0.05 gram per liter) at 70°C. Films 140-5600 Å thick were studied. The experiments were conducted in a vacuum of $5 \cdot 10^{-5}$ - 10^{-6} mm Hg at temperatures of -180 - +300°C. It was found that the electric strength of the films decreases with a rise in temperature. The electric field strength at breakdown of the film is asymmetric for opposite polarities, but this asymmetry decreases at temperatures in excess of 200°C. At comparatively low temperatures, an abrupt increase in the electric strength is observed for films thinner than about 2000 Å. This effect is not observed at 300°C. The experimental results show that breakdown of anodized films at moderately high temperatures is due to impact ionization by electrons.

1/1

USSR

UDC 541.1382:541

GARDIN, Yu. Ye., ODYNETS, I. L., and TUMAKOV, V. S., Petrozavodsk State University imeni O. V. Kuusinen

"Galvanoluminescence Upon Electrochemical Oxidation of Tantalum and Aluminum"

Moscow, Elektrokhimiya, Vol 6, No 10, Oct 70, pp 1562-1564

Abstract: A study was made of the basic regularities in the luminescence which occurs during electrochemical oxidation of tantalum and aluminum. The results of the study indicate that the luminescence of fully formed specimens results from the ionic current component. The anode luminescence is apparently a type of electrochemiluminescence, related to electrode reactions occurring at the oxide-electrolyte interface.

1/1

1/2 049
TITLE—OXIDATION OF TANTALUM IN THE OXYGEN PLASMA OF A HIGH FREQUENCY
DISCHARGE -U-
AUTHOR—(02)—MIKHALKIN, V.S., ODYNETS, L.L.
COUNTRY OF INFO—USSR
SOURCE—ELEKTRIKHIMIYA. MAR. 1970, 6, (3), 359-361
DATE PUBLISHED—MAR70

SUBJECT AREAS—CHEMISTRY, PHYSICS, MATERIALS

TOPIC TAGS—OXYGEN, TANTALUM, PLASMA DISCHARGE, OXIDATION, METAL OXIDE,
BIBLIOGRAPHY, CHEMICAL KINETICS, ELECTROLYTE, ELECTRIC PROPERTY, OXIDE
FILM

CONTROL MARKING—NO RESTRICTIONS

DOCUMENT CLASS—UNCLASSIFIED
PROXY REEL/FRAME—2000/0303

STEP NO—UR/0364/70/006/003/0359/0361

CIRC ACCESSION NO—AP0124062

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--20NOV70

2/2 049

CIRC ACCESSION NO--AP0124062

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE KINETICS OF THE OXIDATION OF TA IN THE O PLASMA OF A H.F. ELECTRODELESS GAS DISCHARGE WERE STUDIED TOGETHER WITH THE ELECTRICAL PROPERTIES AND PROTECTIVE CHARACTERISTICS OF THE RESULTANT OXIDE FILMS. THE KINETIC LAWS GOVERNING THE OXIDATION OF THE METAL SURFACE IN THE GAS DISCHARGE WERE CLOSELY ANALOGOUS TO THOSE GOVERNING ANODIC OXIDATION IN ELECTROLYTES; APPARENTLY VERY MUCH THE SAME MECHANISMS OF OXIDE FORMATION PERSISTED IN BOTH CASES. THE QUALITY OF THE OXIDE FILMS DEPENDED TO SOME EXTENT ON THE ELECTRICAL CONDITIONS (DISCHARGE VOLTAGE, ETC.).

UNCLASSIFIED

ODZINYA, A. Ya.

50 JPRS 59279
14 June 73

OSTAINING EPITAXIAL LAYERS OF GERMANIUM AND SILICON BY THE CHLORIDE METHOD AT REDUCED TEMPERATURES

Алп. Желтедотон, 1, 1909

Article by E. O. Gisenberg, A. Ya. Odzinya, I. I. Kovalev, Ya. A. Naglitskiy, Kirovskiy, Protsessy Rosta i Struktura Monokristallov, 1909, pp. 12-16.
Protsessy Rosta i Struktura Monokristallov, Russian, Part 2, 1909, pp. 12-16.

At the present time, thin weakly alloyed epitaxial layers of a and p-type conductivity on strongly alloyed substrates of the same type and also epitaxial p-p-junctions and epitaxial layers with defined distribution of the alloying admixtures given in advance are widely used in the production of semiconductor devices.

These epitaxial structures usually are obtained by reducing the germanium tetrachloride and silicon by hydrogen. For a long time it was considered [1] that the epitaxial layers of high structural perfection can be obtained by this method only at temperatures above 1200°C for silicon and 850°C for germanium. Such high temperatures cause a basic deficiency in the chloride process — redistribution of the admixtures in the epitaxial layers as a result of a sharp increase in the diffusion with an increase in temperature. The reduction in growth temperature would significantly expand the region of application of the chloride method.

Comparatively recently in references [2, 3] there was a report on the growth of the epitaxial layers of germanium, silicon and other semiconductor materials at reduced temperatures. Good quality epitaxial layers were obtained at temperatures of several hundreds of degrees below the ordinary temperatures. The growth process was carried out in two steps:

- 1) Growth of the thin layer several tenths of a micron thick at the ordinary high temperature.
- 2) Growth of the rest of the layer at a reduced temperature.

It was of interest to investigate the conditions of reproducibly obtaining high-quality epitaxial layers of germanium and silicon by this method and their properties.

USSR

UDC 669.046.5

KRUPMAN, L. I., SOCHNEV, A. Ye., DETOCHKA, V. I., TELESOV, S. A.,
OFENGENDEN, A. M., and NESTEROVICH, R. P.

"Steel Refining in Ladle by Self-Fluxing (Exothermic) Slag Mixtures"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISIS), (Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys).
Izd-vo "Metallurgiya," No 61, 1970, pp 244-246

Translation of abstract: Results are presented of an investigation of the burning rate of self-fluxing mixtures as a function of their thermal state and humidity of the lime used. A procedure is described for preliminary melting of such mixtures with liquid refining of slag in a ladle before casting. Data are presented on experimental heats with refining by self-fluxing mixtures for preliminary melting in a 140-ton ladle. Advantages in using such mixtures are as follows: the degree of desulfurization obtained with the addition of a 3% mixture is on the average 52%; the steel contamination with nonmetallic impurities is reduced; and its plastic properties are improved. 2 tables.

1/1

- 42 -

USSR

UDC 669.046.5

KUPERSHTON, V. Ye., LADYZHENSKIY, B. N., OFENGENDEN, A. M., and SERBIN, V. A.

"Slag Formation and Metal Desulfuration in Covering Slag With Dust-Like Lime"

Moscow, V sb. "Sovremennyye problemy kachestva stali" (MISI5) (Collection of Works. Modern Problems of Steel Quality) (Moscow Institute of Steel and Alloys) Izd-vo "Metallurgiya," No 61, 1970, pp 132-134

Translation of Abstract: The results of an investigation on slag formation and metal desulfuration in a 142-ton martin furnace with lime blowing are presented. 2 figures, 1 table.

1/1

USSR

UDC: 681.327.66:621.317.757

OFENGENDEN, R. G., RATMANSKIY, R. Yu., ANDREYEV, O. M., BEREZIN, F. N., DYSENKO, B. N., MATSKEVICH, G. G., ODINETS, G. S., SHALEYKO, M. A.

"A Pulse Analyzer"

Moscow, Otkrytiya, Izobreteniya, Promyshlennyye Obraztso, Tovarnyye Znaki, No 11, 1970, Author's Certificate No 265951, filed 25 Jan 68, p 41

Abstract: This author's certificate introduces: 1. A pulse analyzer with memory device of the periodic type, based for instance on a magnetic drum. The analyzer contains an analog-to-code converter, memory unit record and playback amplifiers, a data output module, and a control unit. As a distinguishing feature of the patent, the analyzer is simplified by incorporation of a device which records tags for the beginning and end of isolated segments on an auxiliary field of the periodic memory, a unit which codes these tags with its output connected to the recording amplifier, a tag playback amplifier, a device for decoding the reproduced tags, and a unit which passes pulses located in the isolated segments and which is controlled by the decoding device. 2. A modification of this pulse analyzer which has the distinguishing feature of automatic generation of control signals when predetermined number values are accumulated in selected channels. The analyzer contains a device for recording the indicated numbers on an auxiliary field of the periodic memory in phase with the arrangement of the data

1/2

USSR

OFENGENDEN, R. G., et al, Otkrytiya, Izobreteniya, Promyshlennyye Obraztsy, Tovarnyye Znaki, No 11, 1970

accumulated in the corresponding channels. Also incorporated in this pulse analyzer is a comparison unit with its inputs connected to the circuit for playback of signals recorded on this field and to the playback amplifier for the information field, while its output is connected to the circuit which shapes the control signals when the accumulated information is equal to or greater than the predetermined numbers. 3. A modification of this analyzer which has the distinguishing feature of numerical integration of the data accumulated in the isolated segments of the band being measured. The output of the pulse pass unit is connected to the input of the comparison unit. 4. A modification of this analyzer which is distinguished by its ability to record additional information in the memory device during data accumulation. The unit contains a commutator whose control input is connected to the track of a synchropulse field on which a signal is recorded which divides the zones where the measured and auxiliary information are recorded on the memory unit of the analyzer.

2/2

- 241 -

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USSR

UDC 621.791.55:/661.857+669.14/

BEREZINITSKIY, S. N., BATAKSHEV, A. F., MITUS, A. K., ARTEMOV, N. S., and
OFITSEV, A. M., Engrs.

"Welding of Silver to Steel"

Moscow, Khimicheskoye i Neftyanoye Mashinostroyeniye, No 11, Nov 71, p 21

Abstract: Ag cannot be welded to steel directly, because it forms no compounds or solid solutions with Fe. Use of an intermediate layer of pure Cu is unsatisfactory, because deoxidizers and modifiers are absent in Cu, so that pores and cracks develop in the welded joints. Use of standard welding wires of Cu alloyed with Si, Ni, Mn, Ti, and Fe was tried in the lap and butt welding of Ag to steel in experiments in which pure Ag 2 mm thick was welded with steel St. 3 2-11 mm thick. Welding wires with a diameter of 2-3 mm that consisted of bronze Br. KMts 3-1 or bronze Br. MNZh KT5 - 1-0.2-0.2 were used. Welding was carried out manually in Ar with a direct current arc (150-200 A, 15-18 V) at a rate of 15-20 m/hr. The joints that formed had a sufficient mechanical strength and retained their tightness in vacuo at temperatures up to 779°, the melting point of the Ag-Cu eutectic. Microstructural analysis on etching with 4% HNO₃ showed that defects (cracks, 1/2

SSR

BEREZHNITSKIY, S. N., et al., Khimicheskoye i Neftyanoye Mashinostroyeniye,
No 11, Nov 71, p 21

pores, and lack of joining) were absent in the transitional zone between Ag and steel. The procedure that has been developed is being applied in the experimental production of equipment made of Ag and Ag-clad steel and welded with Br. MNZh KT5-1-0.2-0.2.

2/2

USSR

UDC 621.791.55:/661.857+669.14/

BEREZHNITSKIY, S. N., BATAKSHEV, A. F., MITUS, A. K., ARTEMOV, N. S., and
OFITSEV, A. M., Engrs.

"Welding of Silver to Steel"

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JSSR

BEREZHNITSKIY, S. N., et al., Khimicheskoye i Neftyanoye Mashinostroyeniye,
No 11, Nov 71, p 21

pores, and lack of joining) were absent in the transitional zone between Ag and steel. The procedure that has been developed is being applied in the experimental production of equipment made of Ag and Ag-clad steel and welded with Br. MNZh KT5-1-0.2-0.2.

2/2

1/2- 027

UNCLASSIFIED

PROCESSING DATE--09OCT70

TITLE--SYNTHESIS GROWTH, AND STUDY OF THE OPTICAL CHARACTERISTICS OF CSCU
SUB2 CL SUB3 CRYSTALS -U-
AUTHOR--(05)--BELYAYEV, L.M., SOBOLEVA, L.V., GILVARG, A.B., DMITRIYEVA,
F.I., OGADZHANOVA, V.V.
COUNTRY OF INFO--USSR

SOURCE--KRISTALLOGRAFIYA 1970, 15(1), 205-7

DATE PUBLISHED--70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--CRYSTAL OPTIC PROPERTY, CRYSTAL GROWING, THERMAL ANALYSIS,
COPPER CHLORIDE, CESIUM COMPOUND, CRYSTAL LATTICE STRUCTURE, LIGHT
TRANSMISSION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1980/0158

STEP NO--UR/0070/T0/015/001/0205/0207

CIRC ACCESSION NO--AP0048450

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--09OCT70

2/2 027

CIRC ACCESSION NO--AP0048450

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. CSCU SUB2 CL SUB3 WERE PREPD. FROM A STOICHIOMETRIC MIXT. OF CUCL SUB2.2H SUB2 O, METALLIC CU, AND CSCL IN 20PERCENT EXCESS. CSCU SUB2 CL SUB3 FORMS COLORLESS NEEDLES, BECOMING YELLOW AND THEN GREEN IN A MOIST ATM. DTA OF THE STARTING PRODUCT AND PREPD. SINGLE CRYSTALS SHOWED IDENTICAL RESULTS: AN ENDOTHERMIC EFFECT AT 280DEGREES CORRESPONDING TO THE M.P. OF CSCU SUB2 CL SUB3. CSCU SUB2 CL SUB3 BELONGS TO THE RHOMBODIPYRAMIDAL CLASS (3L SUB2 3PC, MM) WITH UNIT CELL PARAMETERS A 9.49, B 11.88, AND C 5.61 ANGSTROM; THE BRAGG ANGLES OF THE 3 PRINCIPAL PLANES (100), (010), (001) ARE THETA (SUB100) EQUALS 9DEGREES 21 PRIME, THETA (SUB010) EQUALS 7DEGREES 27 PRIME, THETA (SUB001) EQUALS 15DEGREES 57 PRIME. THE PRINCIPAL NS, N GAMMA, N BETA, AND N ALPHA, ARE GIVEN FOR 8 MONOCHROMATIC WAVELENGTHS IN THE RANGE 400-691 MN. HIGH TRANSMITTANCE OF CSCU SUB2 CL SUB3 IN THE VISIBLE AND IR RANGE WAS FOUND (TO 20 MU FOR THE THICKNESS 4.5 MM).

FACILITY: INST. KRISTALLOGR., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 576.895.4

OGANDZHANYAN, A. M.

"Contribution to the Fauna and Zonal Distribution of Gamasid Ticks in Armenia"

Yerevan, Fauna i Ekologiya Vrednykh Bespozvonochnykh Zhivotnykh Armyanskoy SSR. Zoologicheskii Sbornik AN ArmSSR, 15 (Fauna and Ecology of Harmful Invertebrates in Armenia. Zoological Collection, Academy of Sciences, Armenian SSR, Vol 15), 1970, p 219

Abstract: About 100 species of gamasid ticks belonging to 15 families are cited for the Armenian fauna. Their distribution within the republic, hosts, dates they were found, and places where freely moving predatory forms were found are mentioned. Most of the species (54) were found on rodents and in their burrows. Ten species were found on insectivores, six on bats, and five on predators. Nine species were found on birds, four of them endoparasites dwelling in the nasal cavity of the birds. Eight tick species were found in birds' nests and two on reptiles. Fourteen species were found on insects used for phoresy. A fairly large number of species (41) were found in the top layer of soil, in forest litter, under fallen leaves, haystacks, and moss, in hollows of trees, and so forth. The zonal distribution of gamasid ticks in
1/2

USSR

OGANDZHANYAN, A. M., Fauna and Ecology of Harmful Invertebrates in Armenia.
Zoological Collection, Academy of Sciences, Armenian SSR, Vol 15, 1970, p 219

Armenia is described. The forest zone has the largest number of species (63)
while the subalpine and alpine zones have the smallest number (14).

2/2

USSR

UDC 577.391:599.323.4

SAAKYAN, D. G. and OGANDZHANYAN, E. Ye., Radiology Sector, Ministry of Health
Armenian SSR

"The Effects of Prophylactic Administration of Sinestrol on Hematopoiesis and
Survival of Irradiated White Mice"

Ieveran, Biologicheskii Zhurnal Armenii, Vol 23, No 12, pp 86-87

Abstract: To investigate the protective effects of sinestrol with respect to radiation sickness, immature white mice were given 0.1 ml of a 2% solution of sinestrol in oil 7 days prior to irradiation with 800 r. The sinestrol caused a small reduction in the concentration of leukocytes and erythrocytes. After irradiation, the blood cell count further decreased, reached a minimum on the 7-9th day, and then gradually increased: 28 mice survived. Control mice, irradiated with the same dose, displayed a much more pronounced fall in the concentration of formed blood elements, with the minimum reached on the 11-14th day and followed by a much slower rise. All control mice died within approximately one month. The following conclusion was made: sinestrol is a useful protective agent against radiation sickness, inasmuch as it increases the survival rate by 37.3%, retards inhibition of hematopoiesis, and promotes a faster regeneration of the circulating blood.

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USSR

UDC 519.2:621.391

OGANDZHANYANTS, S. I.

"Certain Asymptotic Properties of a Time Process Differing From the Realization of Steady-State Random Gaussian Noise"

Leningrad, Metody predstavleniya i apparaturn. analiz sluchayn. protsessov i poley. 3-y Vses. simpozium. Sekts. 2 -- Sbornik (Methods of Display and Machine Analysis of Random Processes and Fields, Third All-Union Symposium, Section 2 -- Collection of Works), 1970, pp 75-79 (from Referativnyy Zhurnal -- Matematika, No 6, June 71, Abstract No 6V228, by Ya. Kogan)

Translation: Characteristics which for a wide enough range of observation distinguish random processes from steady-state gaussian noise with zero mean are indicated for a certain class of random processes. It is noted that introduction of this measure permits a more correct approach to problems of comparison and identification of signals.

1/1

- 28 -

USSR

UDC 621.316.722.1

OGANDZHANYANTS, V.I.

"Functional Units In Voltage Regulators And Their Reliability"

Izv. Leningr. elektrotekhn. in-ta (Bulletin Of The Leningrad Electrical Engineering Institute), 1969, No 88, pp 167-172 (from RZh--Elektronika i yeye primeneniye, No 10, October 1970, Abstract No 108374)

Translation: With satisfactory amplification of the feedback network, the output voltage of a compensation voltage regulator is determined by the magnitude of the reference voltage and the coefficient of division of the output voltage divider. Using this condition, it is possible on the basis of the circuits of regulators to achieve various functional units, e.g., a summation device, a converter of resistance into d-c, a multiplier, etc. A series of such devices is considered as well as their reliability, which guarantees the requirements of marine automatic equipment. 3 ill. 2 ref. S.D.

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AA0043506

A.S. OGanesov
UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent.

1/70

243268 COEFFICIENT SCALING DEVICE for digital computation uses, contains triggers, decade counter, logic units and pulse train generator and provides a versatile functional tool. The input pulses on arrival at the first trigger 1 (see diagram) start the square-wave generator 2. 3,4,6-9 are count triggers, 5 the decade counter, fed in parallel with 1 by the generator. The feedback from 4 to 1 gives a stop signal to 1 (hence generator 2) after the 4th pulse. The process repeats with the next input; each train is or 4 pulses (or more if triggers are added at 3,4). Switching 10,11 and logic 12,13 circuits are added after counters 6-9 and 14 is a reset device, which on receipt of 4 times the scale factor of pulses resets all counters to zero and gives an output signal. Thus, if the

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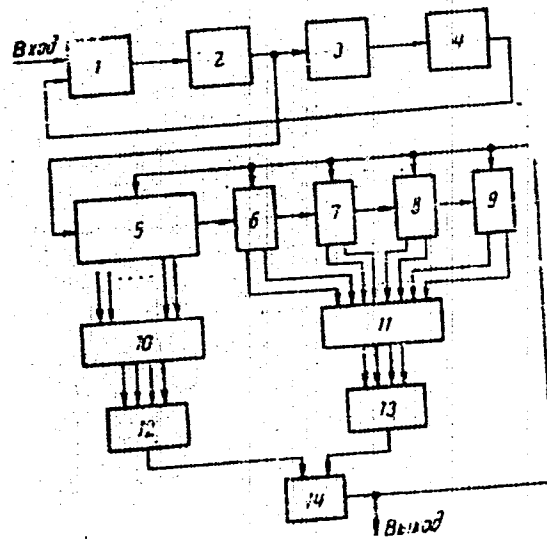
scale factor is to be 11.25, the rest unit 14 receives such signals from decade 5 as to make it reset after 45 pulses. For a factor of 28.5 the reset and output pulses come, as more closely described in the specification, after each 114 generator pulses. The factor can thus be to 1/2.

1.3.68 as 1222263/18-24. A. S. OKANESOV (12.9.69)
Bul 16/5.5.69. Class 42m. Int. Cl. G 06f.

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19761902

AA0043506



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19761903

MT

1/2 026 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--ELECTROPHYSICAL PROPERTIES OF THERMISTORS BASED ON POLYMERS WITH
CONJUGATED DOUBLE BONDS -U-
AUTHOR--(04)--OGANESOV, S.S., MARKOVICH, V.B., PAUSHKIN, YA.M., LUNIN, A.F.
COUNTRY OF INFO--USSR
SOURCE--DOKL. AKAD. NAUK SSSR 1970, 191(2), 330-3 (TECH PHYS)
DATE PUBLISHED--70

SUBJECT AREAS--CHEMISTRY, MATERIALS, PHYSICS

TOPIC TAGS--CONJUGATE BOND SYSTEM, CONJUGATED POLYMER, ORGANIC
SEMICONDUCTOR, ELECTRIC PROPERTY, NITRILE, CYANAMIDE, THERMISTOR

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/0715

STEP NO--UR/0020/70/191/002/0330/0333

CIRC ACCESSION NO--AT0124385

UNCLASSIFIED

2/2 026

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AT0124385

ABSTRACT/EXTRACT--(U) GP-O-

ABSTRACT. THE ELEC. PROPERTIES AND RESISTOR
PARAMETERS OF SEVERAL ORG. SEMICONDUCTOR THERMISTORS. E.G.,
POLYMALONITRILE (I) OR POLYCYANAMIDE, WERE MARKEDLY DEPENDENT ON THE
PREPN. CONDITIONS AND TEMP. THE VOLTAGE CURRENT CHARACTERISTICS OF I
WERE PLOTTED.
MOSCOW, USSR.

MOSK. INST. NEFTEKHIM. GAZOV. PROM. IM. GUBKINA,

UNCLASSIFIED

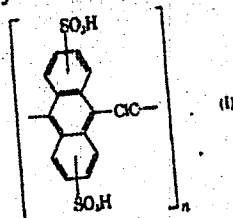
Acc. Nr: **AP0052503** Abstracting Service:
CHEMICAL ABST. 5-70

Ref. Code:

U0460

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101323z Synthesis and properties of new aromatic polymers. Paushkin, Ya. M.; Komissarov, V. I.; Lunin, A. F.; Aleksandrova, V. A.; Oganessov, S. S.; Meshcheryakov, S. V.; Mov, V. N. (Inst. Neftekhim. Gazov. Prom. im. Gubkina, Moscow, USSR). *Vysokomol. Soedin., Ser. B* 1970, 12(1), 53-6 (Russ). The heteropolycondensation of Na_2C_2 with *o*-, *m*-, and *p*- $\text{C}_6\text{H}_4\text{Cl}_2$ and $\text{C}_6\text{H}_3\text{Br}_2$, 1,4- $\text{C}_{10}\text{H}_6\text{Br}_2$ and 1,5- $\text{C}_{10}\text{H}_6\text{Br}_2$ and 9,10-dibromoanthracene in C_{10}H_8 was studied under Ar at 200-87°. The most reactive monomers were the *o*-dibromo derivs. The polymers were brown to black powders stable at up to 300-400°, having an elec. cond. in the range of 10^{-7} - 10^{-12} (ohm cm) $^{-1}$. The polymers were readily nitrated, sulfonated, and aminated; e.g.,



sulfonation with fuming H_2SO_4 gave heat resistant (to 300°) cation exchange resins I of high exchange capacity.

CKJR

REEL/FRAME

19821144

1/2 019
TITLE--RENTOGRAPHY AS A METHOD OF EARLY DIAGNOSIS OF PRECLINICAL FORMS OF
RENAL ANGIOPATHIES IN PATIENTS WITH DIABETES MELLITUS -U-
AUTHOR--(03)--OGANESOVA, V.T., LYASHKO, K.YA., YUDIN, L.A.

UNCLASSIFIED

PROCESSING DATE--30OCT70

COUNTRY OF INFO--USSR

SOURCE--TERAPEVTICHESKIY ARKHIV, 1970, VOL 42, NR 6, PP 75-77

DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES

TOPIC TAGS--DIAGNOSTIC METHODS, DIABETES MELLITUS, KIDNEY, RADIOSOTOPE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3002/1910

STEP NO--UR/0504/70/042/006/0075/0077

CIRC ACCESSION NO--AP0129259

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0129259

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE METHOD OF RADIOISOTOPE RENOGGRAPHY WAS USED FOR INVESTIGATING PATIENTS WITH DIABETES MELLITUS TO REVEAL EARLY PRECLINICAL FORMS OF RENAL AFFECTION. A TOTAL OF 50 PATIENTS WITH DIFFERENT DEGREE OF THE DISEASE SEVERITY (MILD, MODERATE, ACUTE) INCLUDING 22 PERSONS WITHOUT ANY CLINICAL SYMPTOMS OF RENAL AFFECTION WERE EXAMINED. IT WAS ESTABLISHED THAT RENOGGRAPHY IS OF DIAGNOSTIC VALUE WHEN USED IN COMBINATION WITH OTHER METHODS OF INVESTIGATION AND WHEN ACCURATELY DONE CAN BE USED FOR EARLY DIAGNOSIS OF PRECLINICAL FORMS OF RENAL AFFECTION IN DIABETES MELLITUS. FACILITY: KAFEDRA GOSPITAL'NOY TERAPII I KAFEDRA RADIOLOGII I RENTGENOLOGII, I MOSKOVSKOGO MEDITSINSKOGO INSTITUTA IM. I. M. SECHENOVA.

UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT70

1/2 019

TITLE--EXPERIMENTAL STUDY OF A DETECTOR OF ULTRAHIGH ENERGY PARTICLES
USING X RAY TRANSITION RADIATION -U-

A.G.

COUNTRY OF INFO--USSR

SOURCE--PISMA ZH. EKSP. TEOR. FIZ. 1970, 11(7), 347-9

DATE PUBLISHED-----70

SUBJECT AREAS--PHYSICS

TOPIC TAGS--TRANSITION RADIATION, GAMMA DETECTOR, HIGH ENERGY PARTICLE,
CHARGED PARTICLE

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--3001/2208

STEP NO--UR/0386/TC/011/007/0347/0349

CIRC ACCESSION NO--AP0127570

UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0127570

ABSTRACT/EXTRACT--(U) GP-O- ABSTRACT. THE PROBLEM OF SEPG. PARTICLES FROM THE TRANSITION RADIATION WAS SOLVED. A GAMMA DETECTOR OF TOROIDAL FORM WAS USED. CHARGED PARTICLES PASSED THROUGH A CENTRAL OPENING OF THE DETECTOR AND THE PART RADIATION PASSING THROUGH THE OPENING SIMULTANEOUSLY WITH THE PARTICLES WAS NOT REGISTERED. THIS DETECTOR WAS EXAMD. BY E OF 0.4-4 GEV. THE DEVICE WAS ADJUSTED BY A LASER. THE RADIATION WAS REGISTERED IN THE REGION OF HW IS GREATER THAN OR EQUAL TO 15 KEV FREQUENCIES. THE EFFICIENCY (EPSILON) OF E REGISTRATION IS SHARPLY DEPENDENT ON THE E ENERGY; UNDER THE CONDITIONS USED, EPSILON WAS SIMILAR TO 0.1. BY USING DETECTORS WHICH CAN RECORD GAMMA QUANTA OF LOWER ENERGIES, THE HIGH ENERGY PARTICLES CAN BE REGISTERED WITH EPSILON SIMILAR TO 1. THE DETECTOR CAN BE USED FOR IDENTIFYING PARTICLES OF DIFFERENT MASSES WITH A HIGH RESOLN. POWER IN THE REGION OF GREATER THAN OR EQUAL TO GEV PULSES.

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Soviet Inventions Illustrated, Section II Electrical, Derwent, 2/10

243922 SEISMIC PLATFORM contains a movable table for setting out the element of building or structure, grouped together cylinders connected to pulsators and connected by their rods to the test table. The base placed on a foundation has the power cylinders fixed into it with two of the axis of cylinders 1 and 2 horizontal and one cylinder 3 with a vertical axis. The table 4 is fixed to rods 5 of all groups of cylinders i.e. 1, 2 and 3. The rods are pivoted ensuring their movement in spite of the fixed cylinders. The cylinder cavities are connected to a pulsator.

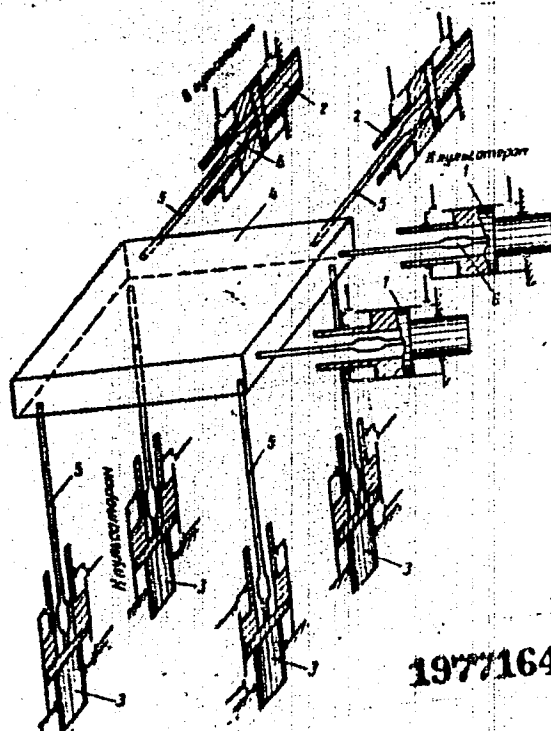
22.5.67 as 115794/29-14.YA.E.TYABLIKOV et al.
(29.9.69) Bul 17/14.5.69. Class 42k. Int.Cl.G 01 1.

AUTHORS: Tyablikov, Yu. Ye., Oganessian, A. T., Morozov, Yu. N.,
Givargizov, G. I., Donchenko, Yu. V., Zavriyev, K. S.,
Napetvaridze, Sh. G.

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